

What is claimed is:

1. A lithium secondary battery, wherein lithium manganese oxide is used as a positive active material, said lithium manganese oxide having a cubic spinel structure of which strength ratio (P_2/P_1 strength ratio) of a primary endothermal peak (P_1) appearing around 950°C and a secondary endothermal peak (P_2) appearing around 1100°C in differential thermal analysis, is 0.5 or less, said lithium manganese oxide having a formula $\text{Li}(\text{M}_1(\text{x}_1)\text{M}_2(\text{x}_2)\text{M}_3(\text{x}_3)\dots\text{M}_m(\text{x}_m))_x\text{Mn}_{2-x}\text{O}_4$, wherein M_1 is Ti and $\text{M}_2, \text{M}_3, \dots, \text{M}_m$ are metals selected from the group consisting of Li, Fe, Ni, Mg, Zn, Co, Cr, Sn, P, V, Sb, Nb, Ta, Mo and W, and wherein x is a substituted amount, and wherein a sum of $\text{X}_1, \text{X}_2, \text{X}_3, \dots$ and X_m is 1.

2. The lithium secondary battery according to claim 1, wherein a Li/Mn ratio in said lithium manganese oxide is over 0.5.

3. The lithium secondary battery according to claim 1, wherein said lithium manganese oxide is yielded by firing a mixture of salt(s) and/or oxide(s) of respective elements adjusted to a given proportion in an oxidation atmosphere, under a temperature in the range of 650 to 1000°C , and for a duration between 5 hours and 50 hours.

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4. The lithium secondary battery according to claim 3, wherein said lithium manganese oxide is yielded by carrying out said firing at least twice or more.

5. The lithium secondary battery according to claim 4, wherein said lithium manganese oxide is yielded by gradually increasing a firing temperature as the number of times of firing increases.

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